

Serial No. 10/655,099
60137-145; 115-3646-U

AMENDMENTS TO THE SPECIFICATION:

Please replace the following numbered paragraphs with the following rewritten paragraphs:

[10] Figure 1A is a perspective view of a valve mounting structure according to one embodiment of the invention;

[10.2] Figure 1B is an exploded view of a valve mounting structure;

[10.4] Figure 1C is a top plan view of a top plate with a double-D opening configuration;

[013] Figure 1A illustrates a valve assembly 100 (illustrated exploded in Figure 1B) which defines a longitudinal axis A, according to one embodiment of the invention. The inventive valve mounting structure includes an adjustment member 102 defined along an axis B generally parallel to axis A, such as a jack screw, attached to between a top plate 104 and a bottom plate 106. In one embodiment, the adjustment member 102 is threaded, but the member 102 may have any structure that can engage and move the bottom plate 106. The adjustment member 102 does not need to be threaded along its entire length; instead, a threaded portion (not shown) can extend partially along the adjustment member 102 over a desired range corresponding to an anticipated range of deck thicknesses in which the valve assembly 100 may be installed. The adjustment member 102 has a tool mating surface 107 at its top portion which is below the top plate 104 when the top plate 104 is located within a groove 112 defined about the valve body 108. The tool mating surface 107 is shaped to accommodate any conventional tool, such as a screwdriver, Allen wrench, etc.

[015] The top plate 104 has an opening 110 (also illustrated separately in Figure 1C) that can accommodate both the valve body 108 and the adjustment member 102. That is, when the top plate 104 is installed, a tool opening 111 (Figure 1C) provides access to the tool mating surfaces 107 therethrough. In one embodiment, the valve body 108 ~~has a groove 112~~ and the opening 110 in the top plate 104 is designed so that the top plate 104 can fit over the end of the

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valve body 108 and be ~~twisted~~ rotated within to engage with the groove 112 while leaving to expose the tool mating surface 107 accessible through a tool opening 111. The engagement between the top plate 104 and the valve body 108 ensures that they will move together if the adjustment member 102 is turned while the bottom plate 106 is fixed in a deck.

[017] Further, the valve body 102 may have an outer perimeter configuration that prevents relative rotational movement. In one embodiment, the outer surface of the valve body ~~102-108~~ both straight and curved portions, such as a double-D shape ~~as shown in Figures 1 through 3~~ including a flat 108F having a channel 108C within which the adjustment member 102 is partially received. The top and/or bottom plates 104, 106 ~~may~~ have openings 110 that accommodate the double-D cross-section as well. The double-D configuration prevents the valve body 108 from twisting relative to the plates 104, 106 and ensures that the plates 104, 106 move linearly relative to the ~~and valve body 108 only move linearly~~ when the adjustment member 102 is turned. Other configurations that prevent the valve body 108 from rotating out of alignment during tightening may also be incorporated; the key is to restrict relative movement of the top plate 104, bottom plate 106, and valve body 108 to linear movement when the adjustment member 102 is turned.

[020] To attach the assembly 100 to the deck 200, the top plate 104 is first removed and the valve body 108 is inserted through the mounting hole 206 from the bottom of the deck 200. The top plate 104 is then replaced over the top of the valve body 108 and twisted into the groove 108 on the valve body 108. When the top plate 104 is rotated about axis A within the groove 112 to align the adjustment member 102 with the tool opening 111 (Figure 1C) such that the tool mating surfaces 107 are accessible through the top plate 104, the opening 110 axially locks the top plate 104 onto the valve body 108. At this point, the top plate 104 rests on the top surface 202 of the deck 202. The bottom plate 106, however, is below the bottom surface 204 of the deck, causing the valve assembly 100 to still be loose in the deck 200.

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[23] In a customized installation, the valve assembly 100 is left intact. The bottom plate 106 is attached to the plywood base 302 with wood screws 312. The underlayment 304, mortar 306, and tile 308 are then built up around the valve assembly 100, surrounding the bottom plate 106 and fixing the bottom plate 106 firmly inside the deck 300. A guide, such as a cardboard shim T (~~not shown~~ Figure 1C), may be placed underneath located between the top plate 104 and bottom plate 106 to indicate a desired thickness for the combined underlayment 304, mortar 306 and tile layers 308 from the valve body 108. Preferably, the shim T comes installed to further simplify installation. The top plate 104 itself may also act as a guide indicating a maximum tile thickness and/or a minimum tile exposure.

[24] Once the mortar 306 has hardened, the adjustment members 102 may be turned as explained above to tighten the assembly 100. If a guide was used, the section of the shim T which extends above the top surface 310 of the deck is cut away and the adjustment member 102 is rotated to draw the top plate 104 and valve assembly 100 downward to the top surface 310 of the deck. The top plate 104 may alternatively be removed to allow removal of the guide and then reinstalled to the valve body 108 before tightening. In this case, turning the adjustment member 102 will cause the top plate 104 and the valve body 108 to move downward toward the bottom plate 106 in the direction shown by arrow B due to interaction of an end 102e of the adjustment member 102 and a radially extending flange 109 attached to the valve body 108. The bottom plate 106 is unable to move in this case because it is fixed inside the deck 300; therefore, turning the adjustment member 102 forces the top plate 104 and valve body 108 to move downward instead of moving the bottom plate 106 upward. The installer preferably continues turning the adjustment member 102 until the top plate 104 rests firmly against the top surface 310 of the deck. As in the example shown in Figure 2, the adjustment member 102 remains accessible from the top of the deck 300 even though the remainder of the valve assembly 100 is embedded in the deck 300, making easy tightening of the assembly 100 possible after installation.

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[025] Regardless of the specific way the valve assembly 100 is installed, the relative movement between the valve body 108, the top plate 104 and the bottom plate 106 is the same when the adjustment member 102 is turned. The only change is the component(s) that actually moves, which is dictated by how the assembly 100 is installed and which component is fixed to the deck and thereby rendered immobile. ~~Because the adjustment member 102~~